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EXAMINER

MA, JOHNNY

ART UNIT

PAPER NUMBER

2614

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/824,531

Applicant(s)

HENNENHOEFER ET AL.

Examiner

Johnny Ma

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed 8/11/2004 have been fully considered but they are not persuasive.

Regarding the rejections of claims 1, 3, and 4. Applicant first argues that “amendments of Claims 1, 3 and 4 made previously satisfy § 112 in so far as similar amendments were made to Claims 2 and 5, and those amendments to claims 2 and 5 have been accepted as obviating a 112 rejection. The examiner respectfully disagrees, claims 1, 3 and 4 are directed to “distributing said modulated single frequency RF signals onto said wideband signal distribution system... said at least one intelligent device including an RF splitter suitable for distributing said modulated single frequency signal into at least an IP signal portion and the non-IP RF modulated signal, and at least one modulator electrically connected to said RF splitter and suitable for modulating at least the IP signal portion split by said RF splitter” whereas claims 2 and 5 are directed to “demodulating single frequency carrier RF signals off of said wideband signal distribution system...” Claims 2 and 5 are supported by the description of Figure 2 in Applicant’s specification wherein “Figure 2 illustrates a local RF receiver / baseband out intelligent device system 200 for use in receiving digital and analog information on an RF carrier frequency...” (Spec. 17:12-14). However, support has not been found regarding claims 1, 3 and 4 as claimed. Figure 4 illustrates a remote sending intelligent device including a modulator. However, Figure 4 does not disclose “including an RF splitter suitable for distributing said modulated single frequency signal into at least an IP signal portion and the non-IP RF modulated signal, and at least one modulator electrically connected to said RF splitter and suitable for modulating at least

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the IP signal portion split by said RF splitter.” Furthermore, although Figure 10 teaches a signal conditioner/splitter, the splitter splits the digital IP signal such that the class of service (COS) ID processor 1009 can determine the quality of service (QOS) needed as opposed to IP signal portion and a non-IP RF modulated signal as claimed.

Regarding applicant’s assertion that “the modulation of signals in a system is taught at least by teaching the demodulation of signals in the same system.” Although the modulation of a signal at a source may be inherent to the successful receipt of a signal for demodulation, it does not follow that modulation to a wideband distribution network, at an intelligent device, is inherent in view of demodulation of a signal from the wideband distribution network.

Applicant’s assertion that support for claims 1, 3 and 4 may be found in the detailed description at least with respect to the discussion of Figure 3 and in Figure 3 is unpersuasive. Figure 3 illustrates a typical BUD unit whereas the claims are directed towards an intelligent device. As disclosed in the specification, the BUD unit and intelligent device are distinct components of the system (Spec. 3:3-13).

As to claim 2, applicant argues that Flickner fails to teach at least signal processing with respect to IP digital information because “DOCSIS as is known to those possessing an ordinary skill in the pertinent arts is directed to a protocol for the distribution of cable television signals. Cable television signals are not IP internet protocol signals.” However, the Flickner reference discloses “the head end 16 is operable to provide and/or support bi-directional data communications with the subscribers 20 via what is known as a cable modem, particularly for accessing the Internet” (Flickner [0029]). The Flickner reference further discloses “[t]he DOCSIS head end 26 allows for Internet capabilities for subscribers 20 via the coaxial cable

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network 18" (Flickner [0030]). The Flickner reference also discloses the "set top box 30 is in communication with various consumer equipment 32, such as a television/television apparatus, a VCR, DVD, IP phone, and the like" (Flickner [0031]). Note the Internet operates using IP digital information and thus the use of DOCSIS for the cable modem to access in the Internet inherently contains IP digital information.

As to applicant's arguments regarding claim 5, please see the discussion of claim 2.

As to applicant's argument regarding the combination of Sutton and Klein. Applicant argues that "Sutton is designed to accomplish the wiring and data communication without modification of the signals. Instead Sutton is designed to place the signals directly onto the pre-run cables... The only modification of the signals contemplated in Sutton is compression, such as by MPEG... The system of Sutton was designed to free bandwidth and for modulation onto RF signals but is not accomplished by, nor does Sutton contemplate, modulating and demodulating." However, the examiner respectfully disagrees. The Sutton reference clearly discloses modulating and demodulating where "[t]he information outlet 52 contains the electronics needed for several modulators and demodulators" (Sutton 3:13-15) and "[t]he junction box 60 contains appropriate modulator means and demodulator means for communicating over the coax wire 56 with complementary demodulator and modulator means in the information outlet 52" (Sutton 3:25-28). The purpose of the Sutton invention is "that in those instances in which a large number of user locations had been prewired, e.g., the cabins on a cruise ship, additional functionality can be provided to the individual cabins without having to rewire and entire ship, as the coax cable 30 which was already present can be used as coax cable 56" (Sutton 4:2-11) which is substantially similar to the purpose of the invention here "eliminate the need to rewire a building

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or add expensive optoelectronic equipment to increase throughput on the existing infrastructure” (Spec 5:7-10). Applicant further argues that “Sutton is not directed toward broadband communications. The examiner respectfully disagrees since the Sutton reference specifically discloses “[t]his modification provides the bandwidth needed to easily provide 100 megabit Ethernet service, and, possibly, ATM data rates” (Sutton 2:1-3) where signals such as data signals from a computer or terminal device or server may be sent bidirectionally (Sutton 3:50-55). Similarly, as Applicant submits, Klein is directed toward broadband communication. The examiner further respectfully submits that contrary to applicant’s assertion, the modification of Sutton with Klein would not add unnecessary steps. As discussed in the previous Office Action, the Sutton reference is silent as to the operation of the disclosed modulators and demodulators. The Klein reference was relied upon to cure the gap so as to provide the correct signal to each output of the wall mounted information outlet where various media and data signals can be sent over a single coaxial line. It is unclear why such a modification would add unnecessary steps that could be obtained by Sutton alone which is silent as to such a combination.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 2 and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Flickner et al. (US 2001/0037512 A1).

As to claim 2, note the Flickner et al. reference which discloses a signal interface for a bi-directional communication device. The claimed “wideband signal distribution system including 568 standard wiring for distributing a plurality of non-IP, RF modulated signals” are met by “single RF band is received from the coaxial cable network 18 via an RF connector/interface 58. It is assumed that the single RF band includes video signals and DOCSIS signals from the head end” (Flickner et al. [0033]), note that coaxial cable is recognized as a cabling choice in the 568 wiring standard. The claimed “at least one intelligent device for demodulating single frequency carrier RF signals off of said wideband signal distribution system” is met by system 36 of Figure 34. The claimed “wherein said single frequency RF signals comprise IP digital information” is met by “... single RF band includes video signals and DOCSIS signals from the head end” (Flickner et al. [0033]). The claimed “said at least one intelligent device including an RF splitter suitable for receiving said modulated single frequency RF signal into at least an IP signal portion and the non-IP RF modulated signal” are met by splitter 66, DOCSIS Tuner 60, and Analog/Digital Video Tuner 68 (see Figure 4). The claimed “and at least one demodulator electrically connected to said RF splitter and suitable for demodulating at least the IP signal portion split by said RF splitter” is met by “... splitter 66 has a first output port 64 to which is coupled a DOCSIS tuner... DOCSIS tuner includes appropriate circuitry/logic in accordance with the DOCSIS specification to receive and tune DOCSIS signals” (Flickner et al. [0033]). Although the Flickner et al. reference does not specifically disclose a demodulator in DOCSIS tuner, nevertheless the examiner submits a demodulator is inherent to the operation of the tuner.

As to claim 5, note the Flickner et al. reference which discloses a signal interface for a bi-directional communication device. The claimed “wideband signal distribution system for

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distributing a plurality of non-IP, RF modulated signals” is met by “single RF band is received from the coaxial cable network 18 via an RF connector/interface 58. It is assumed that the single RF band includes video signals and DOCSIS signals from the head end” (Flickner et al. [0033]). The claimed “at least one intelligent device for demodulating single frequency carrier RF signals off of said wideband signal distribution system” is met by system 36 of Figure 34. The claimed “wherein said single frequency RF signals comprise IP digital information” is met by “...single RF band includes video signals and DOCSIS signals from the head end” (Flickner et al. [0033]). The claimed “said at least one intelligent device including an RF splitter suitable for receiving said modulated single frequency RF signal into at least an IP signal portion and the non-IP RF modulated signal” are met by splitter 66, DOCSIS Tuner 60, and Analog/Digital Video Tuner 68 (see Figure 4). The claimed “and at least one demodulator electrically connected to said RF splitter and suitable for demodulating at least the IP signal portion split by said RF splitter” is met by “...splitter 66 has a first output port 64 to which is coupled a DOCSIS tuner...DOCSIS tuner includes appropriate circuitry/logic in accordance with the DOCSIS specification to receive and tune DOCSIS signals” (Flickner et al. [0033]). Although the Flickner et al. reference does not specifically disclose a demodulator in DOCSIS tuner, nevertheless the examiner submits a demodulator is inherent to the operation of the tuner. The claimed “wherein said at least one intelligent device uses an existing media control access layer of the network in order to control the sharing of media channels among multiple addressable devices in the system” is met by the use of DOCSIS, where the specification includes a MAC protocol.

***Claim Rejections - 35 USC § 103***



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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton, Jr. (US 5,968,118) in further view of Klein (US 6,637,030 B1).

As to claim 2, note the Sutton, Jr. reference which discloses an information outlet and industrial set top functionality. The claimed "wideband signal distribution system including 568 standard wiring for distributing a plurality of non-IP, RF modulated signals" is met by "...coax wire 56 is used to multiplex all of the signals which are required by the user in the location 54...signals which are sent over the coax cable 56 include video signals from a video monitor or a conventional TV receiver 68" (Sutton, Jr. 3:43-47), note that coaxial cable is recognized as a cabling choice in the 568 wiring standard. The claimed "at least one intelligent device for demodulating single frequency carrier RF signals off of said wideband signal distribution system" is met by "...information outlet 52 contains the electronics needed for several modulators and demodulators" (Sutton, Jr. 3:13-15). The claimed wherein said single frequency RF signals comprises digital information are met by "[o]ther signals, which may be sent bidirectionally, between the information outlet 52 and the junction box 60, include telephone signals from a telephone 72 or telephone head end 22, data signals from a computer or terminal device 74 or server 20, and infrared signals from a remote control unit 76 (Sutton, Jr. 3:50-55) where the disclosed telephone, computer, and server are intelligent peripherals. However, the Sutton, Jr. reference is silent as to the operation of the modulators and demodulators within the

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disclosed information outlet. Now note the Klein reference which discloses a broadband cable television and computer network. The claimed "said at least one intelligent device including an RF splitter suitable for receiving said modulated single frequency RF signal into at least an IP signal portion and the non-IP RF modulated signal, and at least one demodulator electrically connected to said RF splitter and suitable for demodulating at least the IP signal portion split by the RF splitter" is met by "...is routed to a first tunable receiver/demodulator 70 having a frequency range of approximately 50 to 750 MHz. This receiver additionally may comprise one or more demodulators for retrieving NTSC or Pal encoded video from the cable television service, FM audio signals, and also for recovering digital data from, for example, cable service provided Internet access" (Klein 8:1-9). Therefore, the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Sutton, Jr. information outlet with demodulators and modulators with the Klein coupling and splitting of different signals to their respective demodulators for the purpose of providing the correct signal to each output of the wall mounted information outlet where various media and data signals can be sent over a single coaxial line.

As to claim 5, note the Sutton, Jr. reference which discloses an information outlet and industrial set top functionality. The claimed "wideband signal distribution system for distributing a plurality of non-IP, RF modulated signals" is met by "...coax wire 56 is used to multiplex all of the signals which are required by the user in the location 54...signals which are sent over the coax cable 56 include video signals from a video monitor or a conventional TV receiver 68" (Sutton, Jr. 3:43-47), note that coaxial cable is recognized as a cabling choice in the 568 wiring standard. The claimed "at least one intelligent device for demodulating single

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frequency carrier RF signals off of said wideband signal distribution system” is met by “...information outlet 52 contains the electronics needed for several modulators and demodulators” (Sutton, Jr. 3:13-15). The claimed wherein said single frequency RF signals comprises digital information are met by “[o]ther signals, which may be sent bidirectionally, between the information outlet 52 and the junction box 60, include telephone signals from a telephone 72 or telephone head end 22, data signals from a computer or terminal device 74 or server 20, and infrared signals from a remote control unit 76 (Sutton, Jr. 3:50-55) where the disclosed telephone, computer, and server are intelligent peripherals. The claimed “wherein said at least one intelligent device uses an existing media control access layer of the network in order to control the sharing of media channels among multiple addressable devices in the system” is met by the disclosed Sutton, Jr. bi-directional signaling (Sutton, Jr. 3:50-55). Although the Sutton, Jr. reference does not specifically disclose the use of a media control access layer the examiner submits that a MAC is inherent to the disclosed system in order to facilitate the flow of data between connected devices. However, the Sutton, Jr. reference is silent as to the operation of the modulators and demodulators within the disclosed information outlet. Now note the Klein reference which discloses a broadband cable television and computer network. The claimed “said at least one intelligent device including an RF splitter suitable for receiving said modulated single frequency RF signal into at least an IP signal portion and the non-IP RF modulated signal, and at least one demodulator electrically connected to said RF splitter and suitable for demodulating at least the IP signal portion split by the RF splitter” is met by “...is routed to a first tunable receiver/demodulator 70 having a frequency range of approximately 50 to 750 MHz. This receiver additionally may comprise one or more demodulators for retrieving NTSC or Pal

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encoded video from the cable television service, FM audio signals, and also for recovering digital data from, for example, cable service provided Internet access" (Klein 8:1-9). Therefore, the examiner submits that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Sutton, Jr. information outlet with demodulators and modulators with the Klein coupling and splitting of different signals to their respective demodulators for the purpose of providing the correct signal to each output of the wall mounted information outlet where various media and data signals can be sent over a single coaxial line.

### ***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johnny Ma whose telephone number is (703) 305-8099. The examiner can normally be reached on 8:00 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (703) 305-4795. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jm



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